

CLAIMS

1. A recombinant vesicular stomatitis virus (VSV) particle comprising a nucleic acid molecule encoding a foreign glycoprotein inserted into the viral genome.

5 2. The recombinant VSV particle according to claim 1 wherein the foreign glycoprotein is a VHF glycoprotein or an immunogenic fragment thereof.

3. The recombinant VSV particle according to claim 2 wherein the VHF glycoprotein is selected from the group consisting of: a glycoprotein from Lassa virus; a glycoprotein from Marburg virus; a glycoprotein from Ebola virus; a glycoprotein from Crimean-Congo HFV; a glycoprotein from Dengue virus; a glycoprotein from Nipah virus; a glycoprotein from Hendra virus; a glycoprotein from Machupo virus; a glycoprotein from Junin virus; a glycoprotein from Guanarito virus; and a glycoprotein from Sabia virus.

15 4. The recombinant VSV particle according to claim 1 wherein the nucleic acid molecule is inserted between the glycoprotein and polymerase genes of the viral genome.

5. The recombinant VSV particle according to claim 1 wherein the nucleic acid molecule is inserted adjacent to the nucleoprotein gene of the viral genome.

20 6. The recombinant VSV particle according to claim 1 wherein the nucleic acid molecule substantially replaces the VSV glycoprotein gene.

7. A nucleic acid molecule comprising recombinant vesicular stomatitis virus genome and a nucleic acid molecule encoding a foreign glycoprotein.

25 8. The nucleic acid molecule according to claim 7 wherein the foreign glycoprotein is a VHF glycoprotein or an immunogenic fragment thereof.

9. The nucleic acid molecule according to claim 8 wherein the VHF glycoprotein is selected from the group consisting of: a glycoprotein from Lassa virus; a glycoprotein from Marburg virus; a glycoprotein from Ebola virus; a glycoprotein from Crimean-Congo HFV; a glycoprotein from Dengue virus; a glycoprotein from Nipah virus; a glycoprotein from Hendra virus; a glycoprotein from Machupo virus; a glycoprotein from Junin virus; a glycoprotein from Guanarito virus; and a glycoprotein from Sabia virus

10. The nucleic acid molecule according to claim 7 wherein the nucleic acid molecule is inserted between the glycoprotein and polymerase genes of the viral genome.

5 11. The nucleic acid molecule according to claim 7 wherein the nucleic acid molecule is inserted adjacent to the nucleoprotein gene of the viral genome.

12. The nucleic acid molecule according to claim 7 wherein the nucleic acid molecule substantially replaces the VSV glycoprotein gene.

13. A method of eliciting an immune response in an individual comprising:

10 administering to an individual a recombinant vesicular stomatitis virus (VSV) particle comprising a nucleic acid molecule encoding a foreign glycoprotein inserted into the viral genome.

14. The method according to claim 13 wherein the foreign glycoprotein is a VHF glycoprotein or an immunogenic fragment thereof.

15 15. The method according to claim 14 wherein the VHF glycoprotein is selected from the group consisting of: a glycoprotein from Lassa virus; a glycoprotein from Marburg virus; a glycoprotein from Ebola virus; a glycoprotein from Crimean-Congo HFV; a glycoprotein from Dengue virus; a glycoprotein from Nipah virus; a glycoprotein from Hendra virus; a glycoprotein from Machupo virus;
20 a glycoprotein from Junin virus; a glycoprotein from Guanarito virus; and a glycoprotein from Sabia virus

16. The method according to claim 13 wherein the nucleic acid molecule is inserted between the glycoprotein and polymerase genes of the viral genome.

25 17. The method according to claim 13 wherein the nucleic acid molecule is inserted adjacent to the nucleoprotein gene of the viral genome.

18. The method according to claim 13 wherein the nucleic acid molecule substantially replaces the VSV glycoprotein gene.

19. The method according to claim 13 wherein the particle is administered orally.

30 20. The method according to claim 13 wherein the particle is administered intranasally.

21. A method of preparing a pharmaceutical composition for passive

immunization of an individual in need of immunization comprising:

administering to an animal a recombinant vesicular stomatitis virus (VSV) particle comprising a nucleic acid molecule encoding a foreign glycoprotein inserted into the viral genome;

5 harvesting antibodies from said animal; and

mixing said antibodies with a suitable excipient or carrier, thereby forming a pharmaceutical composition.

22. The method according to claim 21 wherein the foreign glycoprotein is a VHF glycoprotein or an immunogenic fragment thereof.

10 23. The method according to claim 22 wherein the VHF glycoprotein is selected from the group consisting of: a glycoprotein from Lassa virus; a glycoprotein from Marburg virus; a glycoprotein from Ebola virus; a glycoprotein from Crimean-Congo HFV; a glycoprotein from Dengue virus; a glycoprotein from Nipah virus; a glycoprotein from Hendra virus; a glycoprotein from Machupo virus;
15 a glycoprotein from Junin virus; a glycoprotein from Guanarito virus; and a glycoprotein from Sabia virus.

24. The method according to claim 21 wherein the nucleic acid molecule is inserted between the glycoprotein and polymerase genes of the viral genome.

20 25. The method according to claim 21 wherein the nucleic acid molecule is inserted adjacent to the nucleoprotein gene of the viral genome.

26. The method according to claim 21 wherein the nucleic acid molecule substantially replaces the VSV glycoprotein gene.

27. The method according to claim 21 wherein the particle is administered orally.

25 28. The method according to claim 21 wherein the particle is administered intranasally.